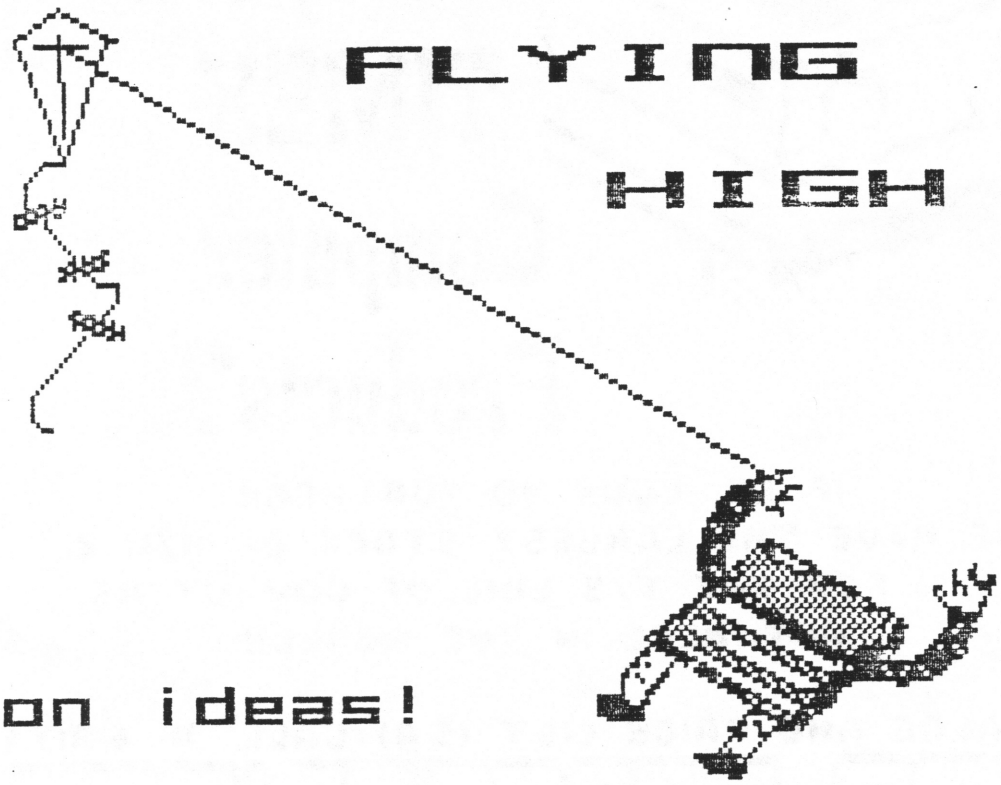
THE NEWSLETTER FOR SEATUG

SWYM

MAR/APR
1992

VOLUME 7
NUMBER 9



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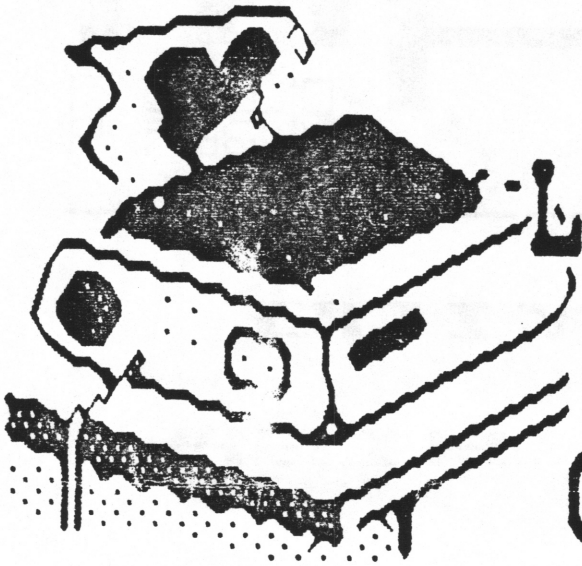

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A PUBLICATION OF SEATUG

NEXT MEETING

APR 1, 1992

MAY 7, 1992

7:30 P.M.

LOCATION

UNIVERSITY FEDERAL SAVINGS BANK

8517
35th Ave NE
Seattle

RANDOM BITS.....2
Turning Big-Blue Tricks
Making *YOUR* Door-stop jealous!

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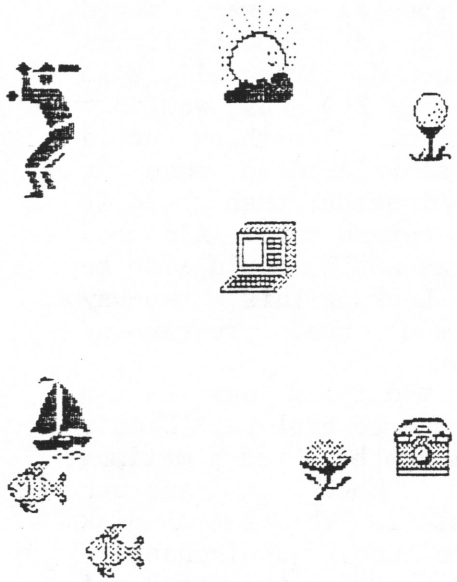
Demanding applications for the job opening of Secretary NOW!

2068 SECOND SCREEN.....4
Your computer has some very impressive display features. Dale Fritz reveals how to manipulate it for some dual-screen action!

MIKE'S NOTEBOOK.....6
Flexible DATA statements made easy, the Di Rienzo way



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386 FILE SERVING

A recent contact to Bill Miller of SLIX brought home a point to a long-awaited development: If we want to see 386 file serving to T/S computers as a reality, we (meaning clubs) are going to have to do it ourselves.

OK, fair enough, I guess. The only way anyone is going to experience exciting developments within our hobby is to take the bull by the horns. Collectively, the national community, if interested, should be able to pull this off. And how can you not be interested? Being able to interface into Big Blue would be a shot in the arm. And file serving just could be that shot.

How would this be possible? First of all, special hardware would be required. Speed compatibilities should be considered. After all, a 25 Mhz 386 signal on a Z80 bus wouldn't even get attention. Something would be required to slow it down once it reached its destination, then speed it back up for the return trip. A common language, such as ASCII, would also be a requirement. Lacking this, two-way look-up tables would need programming for both machines.

T/S modem modifying may be an interesting avenue to explore. Didn't the Byte-Back modem boast of a maximum speed of 19.2 kbs? Another possibility lies in the Zebra disk system. There are dual-channel, serial ports provied in the back of each controller, with selectable baud rates from 50 bps to 19.2 kbs!

Along very similar lines is the development possibility of a TS2068 Token Ring network! Wouldn't you just love to blow 'em away at the next convention with this!

Think about it. It's fun. Let the ideas bubble up. That's fun, too. Then tell everyone. Get their ideas. Make yours better. The fun is building steam. Get a few buddies excited enough to want to be a part of this. Then go ahead and build the darn thing. Test it out. See how well it works. Then tell everyone again. And that is the most fun of all.

NEW NEWSLETTER

Newsletters, as a lot, tend to come and go, but a recent newcomer deserves special attention. Lest you think that a fancy high-end system is necessary for quality work, there is a particular Andre Baune, of Quebec, Canada, that will make you sit up and take notice.

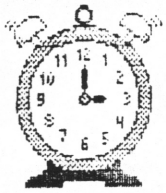
The newsletter is called "ZX-91 10 Years Later" and it's "the new newsletter for the Sinclair ZX81/Timex 1000." Not only will its look surprise you with a certain familiarity, but you'll be most impressed to learn that the entire publication has been "created with, and only, a ZX81, a 16K rampack and a Timex 2040 printer."

One of the complaints about so-called "low-end" systems is that quality does not come instantaneously, like on 486 machines. Bascially, most of us don't want to take the time required to do a good job using limited resources when it could be done in a fraction of the time using unlimited resources. So we gradually move away from the "cheap" sets to the expensive ones, forgetting about the feel-good acheivements of long-ago micros.

Andre Baune brings that back. He has taken the time required to produce a truly entertaining newsletter. And wait until you see the graphics! Andre is displaying a lot of talent with these clever illustrations. Batman, Dagwood Bumstead and Andy Capp, to name a few, are instantly recognizable in animated poses. If you haven't yet seen "ZX-RATED", you're missing what a little imagination can do!

Additionally, ZX-91 offers programming tips, games and other programs listed to enhance the computer's abilities.

Currently being offered as free, Andre is merely asking support by circulation. Write to him at 304 Scott, Chateauguay, Quebec, Canada J6J 4H5. Tell him SWYM sent ya.



MINUTES WITH SEATUG

by Chuck Kerekuck, Default

February 6, 1992

The meeting began around 7:30 P.M. Treasurer Dave Battershill was presiding due to President Malcolm Post's envious Hawaiian vacation and also due to a lack of a Vice President to take over in these events. I'm sort of taking notes, due to a lack of having a Secretary. So, since I'm also SWYM Editor, I get to say anything that I want to have happened!

The drunken brawl was quite refreshing and the escort service was very co-operative.....

Actually, that didn't happen. We may plan it for a future picnic, though. What really kicked off this meeting was the welcoming of a brand new, member! We were especially grateful for this, because there were only four regular members present (actually, five, counting very-late-comer Al)! The New Guy is Mr. Roy Piercy of Tacoma. Welcome to SEATUG, Roy! He didn't arrive empty-handed, either. With him was an item never-before seen in the hallowed halls of SEATUG: A complete TS1500 system (computer, T/S cassette recorder, cables, TV switch, tape programs and books), with attache case of custom-cut foam interior to hold all components! Now, this wasn't the same type attache with 1500 that was auctioned off, some time ago. This was a real simulated-leather/metal unit that was part of a computer programming course. Remember those old magazine ads showing a stuffed white-shirt-and-tie with a TS1500 in foreground? There was only one problem with Roy's 1500: It didn't work! Have no fear, Roy. There are enough hardware brains in this outfit to handle anything. We'll fix you up, but good!

Next, was a serious discussion on the ever-popular Missing EPROM Burner. Why is this thing so elusive? We actually had recovered it, at one poulated meeting in the not-too-distant past. Someone offered to take it home to check it out...

Will the person who is discretely holding it, quietly slip it under the doormat of some unsuspecting SEATUG member and leave a note?

While the rest of us were attempting to solve this mystery, Derryck Turner had a brilliant flash: Since the club's treasury is now in excess of 400 clams, how about just BUYING a new one? Units I've seen in Professional catalogs would virtually de-gut our treasury, so other sources must be found. Let's start looking! And if, while looking, you just happen to come across our OLD EPROM burner, turn it in!

If we do find or buy one, Roy has offered his supply of 2764 EPROM chips. Also in his supply are 27255s and even 1 Meg units! Thanks, Roy! And thanks for joining SEATUG!

Speaking of the treasury, an actual motion was made to forego this year's club dues. This motion was at least partially based on the above-mentioned Treasury Amount. Nuts, says I. Our remote members are mailing in renewal checks (you ARE, aren't you??). And how can we explain that sometimes we accept dues and other times, we don't? Fortunately, everyone came to their senses and the motion was voted down.

Librarian Dale Fritz wheel-barrowed in the latest December 1991 editions of the SEATUG software catalogs. There are at least 10-15 new software programs from previous editions! Separate publications cover TS1000 (ZX81, TS1500), TS2068 and Spectrum computers. If you don't yet have one of these, kick yourself firmly. If you're a remote member and want one mailed to you, please write for further info, such as postage costs. Please indicate which ones you want. If you're a local member and want one mailed to you, you'll have to attend a meeting to get one! If it's one thing SEATUG needs, it's meeting attendance! Nuff said!

Dave announced a returning former member: Jeff Berosik of Kirkland, WA. Welcome back to the fold, Jeff! We haven't seen your friendly face for

a while. Maybe soon, eh?

For the evening's demo, inventor Robert Jorgenson brought the beginnings of his next hardware project: A TS1000-controlled robot! No electronics were on display, as yet, but an ingenious motor-controlled mobile base looked like an impressive start. Robert reports that, when completed, this unit will navigate all around his house, performing a number of incredible feats, such as acting as a pre-programmed remote-remote for his TV/VCR! Now, this is exciting stuff!

Derryck Turner outlined his next software project: Using his 2068 to monitor and plot Ni-Cad battery discharge rates! Seems there is a slight haze of mystery surrounding these things. The Old Wives's Tale says if Ni-Cads are not fully discharged before recharging, they develop a "memory", preventing you from completely discharging them in the future, meaning recharging rates go up. Derryck has data that directly contradics this. What better way to scientifically clear this up, than with a computer? And what better computer than the versatile 2068?

Two major questions surfaced at the meeting:

1.) What ever happened to T/SNUG? Is it alive or dead?

2.) What ever happened to 386 file serving? To this, Dave Battershill checked with Bill Miller of SLIX. It seems that further development of interfaces to the various T/S disk systems have been left to the user groups. Let's get hopping!

See what all you other guys are missing, by staying home??

2068 SECOND SCREEN

(with a 1000 supplement)

Dale Fritz, SEATUG

Most of us know that the 2068 has a second independent screen (known as Display File 2-see pg 248 of the 2068 User Manual), but methods to easily use this screen are not widely known. My interest was in after drawing some elaborate Hilbert Curves on the main screen, I wanted to print a Menu to give choices of Copy or continue in various modes. The Menu would destroy the main screen and there wasn't much room in Lines 22, 23 for a Menu. How could I use the second screen for my Menu and then go back to the first screen with my picture intact?

The 2068 Technical Manual, Appendix C, has 16 pages of machine code concerning the second screen, where one can Clear Screen, Set Cursor, Print Character, Scroll, etc. My needs were much more modest.

Stan Lemke, of Desktop Publishing fame, published a small program, "Blink", in SyncWare News which considerably simplifies use of the second screen. There are three routines:

A. Read a modest amount of data from a Data statement and initiate the second screen.

B. Build a Menu (or whatever) on the main screen and transfer it to screen 2.

C. Bring screen 2 back to screen 1 for editing and improvement. Use routine B to return the improved version to screen 2.

As one could guess, there are some limitations. LIST, PRINT, PLOT, DRAW, etc. will not work in Display File 2. Even more disconcerting, you can't get any messages from the computer when using the second screen. All the messages are being printed on the main screen and you aren't there. The answer, say, in case of a Menu, is to provide safeguards around an adequate INPUT response and get back to the main screen.

OUT 255,0 brings in the main screen. (Display File 1)

OUT 255,1 brings in the second screen. (Display File 2)

```
8990 REM ..SR A-INIT 2nd SCN..
9000 DATA 46,0,62,1,211,244,219,
255,203,255,211,255,62,6,245,251
,205,142,14,219,255,203,191,211,
255,175,211,244,241,254,128,32,4
,50,91,104,251,201,33,0,64,17,0,
96,1,0,27,237,176,201,33,0,96,17
,0,64,24,242
9010 FOR i=23383 TO 23440: READ
a: POKE i,a: NEXT i: RANDOMIZE U
SR 23383: OUT 255,0: RETURN

9090 REM ..SR B-SCN 1 to SCN 2..
9100 RANDOMIZE USR 23421: RETURN

9190 REM ..SR C-SCN 2 to SCN 1..
9200 RANDOMIZE USR 23433: RETURN
```

Here is a short demo which plots a circle on screen 1 and gives a COPY, CONTINUE Menu in screen 2. To improve the Menu, GOTO 500. If you BREAK while the Menu is on the screen, enter OUT 255,0.

```
  10 REM ..SCREEN 2 DEMO..
  20 REM CODED:Dale Fritz,SEATUG
  90 REM ..INITIATE..
 100 GO SUB 9000
 110 PRINT AT 3,10;"MENU";AT 5,8
;"0. VIEW SCREEN";AT 6,8;"1. COP
Y";AT 7,8;"2. CONTINUE";AT 18,0;
"Enter Choice"
 120 GO SUB 9100
 190 REM ..MAIN PROGRAM..
 200 CLS: LET x=132: LET y=87:
LET r=5
 210 FOR i=1 TO 10: CIRCLE x,y,r
 220 PAUSE 75: OUT 255,1
 230 LET z$=INKEY$: IF z$="" THE
N GO TO 230
 240 IF CODE z$<48 OR CODE z$>51
 THEN GO TO 230
 250 OUT 255,0
 260 IF z$="0" THEN PAUSE 0
 270 IF z$="1" THEN COPY: GO TO
     290
 280 IF z$="3" THEN STOP
 290 LET r=r+5: NEXT i
 300 STOP
 490 REM ..ADD TO MENU..
 500 GO SUB 9200: PRINT AT 8,8;"
     3. STOP"
 510 GO SUB 9100: PAUSE 50: GO T
     O 200
```

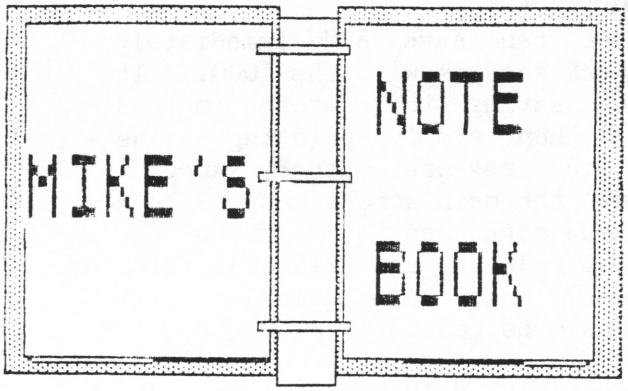
1000 SUPPLEMENT

One can save and immediately print back screens with the 1000. It involves saving the screen in a string, then simply printing the string to restore the screen. Consider the main screen as A$ and the second screen as B$. Using the following routines and PRINT A$, PRINT B$, a very comparable demo to that above could be made.

```
8990 REM ..SAVE MAIN SCREEN..
9000 DIM A$(704)
9010 FOR K=0 TO 21
9020 FOR L=1 TO 32
9030 LET A$(L+32*K)=CHR$ PEEK (P
EEK 16396+256*PEEK 16397+L+33*K)
9040 NEXT L
9050 NEXT K
9060 RETURN

9090 REM ..SAVE SECOND SCREEN..
9100 DIM B$(704)
   .
   .
9150 NEXT K
9160 RETURN
```

Postscript: Alternately, there is a 2068 WINDOWS Demo in the SEATUG Library, which could be studied and used for a Menu instead of the second screen. However, if I had remembered that sooner, we would not have had these neat screen subroutines.



by Michael J. Di Rienzo

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One of the "must have" utilities that any self-respecting software "hacker" needs in his/her arsenal of tools is a DATA line maker. Although there are several available,especially for the Spectrum ROM, my favorite one appeared in the May 1988 Newsletter of the Capital Area Timex Sinclair Users Group by H.E. Weppler. I have simplified it and moved the CODE to a safe area below BASIC.

This program performs the opposite of POKing CODE into RAM addresses from a DATA line. It will create a user specified DATA line containing CODE extracted from a user-specified range of addresses. For example, if you have some machine code, font code, or an ASCII text file located somewhere in memory, and would like to extract the code and place it into DATA statements to use in another program, this simple program can be MERGEd or LOADED to do the job. Enter the following BASIC program and be sure to RUN line 9950 to initialize the short machine code. The program will then automatically RUN. You will be prompted for a line number to assign the DATA statement. Any line number will do if it is less than 9900. Next INPUT the starting address of the CODE you wish to extract. Lastly you will be prompted for the end address of the range of bytes you want to extract. I recommend that you don't extract more than 150 bytes at any one time. If you do, editing that DATA line will be difficult. If your CODE is more than 150 bytes long then keep track of the line numbers and address ranges and RUN line 9900 until you have all your CODE placed into BASIC lines. The machine code used in this program is completely relocatable. To quickly see how this program works, try this:

RUN line 9900. At the prompt, enter 10 (ENTER). That means we want to make a DATA statement at line 10. The next prompt asks you to enter the starting address of the CODE. Let's extract the CODE from this program which begins at address 24311, so input that number. Next, INPUT the end address of the range of addresses we are extracting, ie. 24352 (ENTER).

Now you're done. Compare your result with line 9965. If your CODE is lengthy, break it down into several DATA statements by re-RUNning line 9900 several times.

Have fun!

Happy TIMEXing...

"MKDATA" By Michael J. Di Rienzo

```
9900 INPUT "Input Line # to put DATA
     (<9900)";LL
9910 INPUT "Input CODE Start
     address ";SS
9915 INPUT "Input CODE End
      address ";EE
9920 LET R$=STR$ LL+CHR$ 228
9925 FOR N=SS TO EE
9930 LET R$=R$+STR$ PEEK N+","
9935 NEXT N: LET R$=R$( TO LEN R$-1)
9940 RANDOMIZE USR 24311
9945 STOP
9950 FOR N=24311 TO 24352
9955 READ M: POKE N,M: NEXT N
9960 RUN
9965 DATA 33,19,0,9,229,229,42,97,92,
          43,43,205,99,19,14,82,205,
          187,44,35,78,35,70,35,229,
          197,42,89,92,229,205,187,
          18,209,193,225,237,176,
          205,58,14,201
9999 SAVE "MKDATA" LINE 9950
```